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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER	
BROWN, JENNINE M	

ART UNIT	PAPER NUMBER
1755	

DATE MAILED: 03/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/869,331	YABUNOUCHI ET AL.	
	Examiner	Art Unit	
	Jennine M. Brown	1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *12/23/2003*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7 and 10-40* is/are pending in the application.

4a) Of the above claim(s) *4 and 13-40* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,5-7 and 10-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

Claim Rejections - 35 USC § 112

Examiner has entered Applicants amendment, which obviates Examiners previous rejection, therefore the rejection has been withdrawn.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-3 and 5-7, 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Takeuchi, et al. (US 5747614).

Takeuchi, et al. disclose an olefin polymerization catalyst comprising 3 components (A), (B) and (C) (col. 4, l. 48-54). Compound (A) is a transition metal complex having Group 3 to 6 transition metals, most preferably titanium (formulae I-a, I-b, II, III) (col. 2, l. 27 - col. 4, l. 40). Compound (B) is an oxygen containing compound with an element of Group 13 such as boron, aluminum or gallium, such as the aluminoxane complex (IV) or (V) (col. 4, l. 55 – col. 5, l. 15). Compound (C) is represented by the ionic compound (VII) or (VIII) (col. 5, l. 16 – col. 7, l. 10) where formula (IX) is representative of an aluminum compound. No patentable distinction is seen between claimed catalyst and that taught by Takeuchi, et al. Disclosed is a method for producing styrene polymers (Examples 17, col. 19, l. 34 – col. 7, l. 24), styrene is a specific subclass of olefins.

Claims 1-3 and 5-7, 10-12 are rejected under 35 U.S.C. 102(b) as being anticipated by Aoyama, et al. (US 5807940).

Aoyama, et al. disclose an olefin polymerization catalyst comprising 3 components (A), (B) and (C) (abstract). Compound (A) is a transition metal complex having Group 3 to 6 transition metals, most preferably titanium (col. 2, l. 58 - col. 4, l. 6). Compound (B) is represented by two compounds (II) and (III) which are oxygen containing compounds (col. 2, l. 26-50; col. 5, l. 59 – col. 7, l. 12). Compound (C) is represented by the ionic compounds (IV) or (V) having metals that can preferably be selected from groups 5-15 of the periodic table of the elements (col. 4, l. 14 – col. 5, l. 53). Optional alkylating agent (D) is disclosed as (VIII), (IX) and (X) which correspond to claimed structures I-12, I-13 and I-14 (col. 7, l. 22-67). No patentable distinction is seen between claimed catalyst and that taught by Aoyama, et al. Disclosed is a method for producing syndiotactic polystyrene (Examples 1-2, col. 10, l. 33-67), styrene is a specific subclass of olefins.

Claims 1-3 and 5-7, 10-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Yabunouchi, et al. (US 5854165)

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Yabunouchi, et al. disclose an olefin polymerization catalyst comprising 3 components (A), (B) and (C) (col. 21, l. 32-54). Compound (A) is a transition metal complex having Group 3

to 10 transition metals, most preferably titanium (col. 6, l. 46-52; col. 6, l. 65 – col. 13, l. 52). Compound (B) is an oxygen containing aluminum compound represented by formulas (XV) and (XVI) (col. 18, l. 43–65). Compound (C) is represented by ionic equations (XIII) or (XIV) which can belong to groups 5 to 15 of the periodic table of the elements and particularly to groups 13 to 15 (col. 16, l. 19 – col. 18, l. 37). The optional alkylating agent is also disclosed (col. 20, l. 10-27). A method of preparing an olefinic polymer was also disclosed in Examples 2-5, col. 25, l. 25-63. No patentable distinction is seen between claimed catalyst and that taught by Yabunouchi, et al.

Claims 1-3 and 5-7, 10-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Yabunouchi, et al. (US 6255244 B1)

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Yabunouchi, et al. teach an olefin polymerization catalyst comprising 3 components (A), (B) and (C) (col. 6, l. 57-63). Compound (A) is a transition metal complex having Group 3 to 10 transition metals, most preferably titanium represented by formulas (1) through (5) (col. 2, l. 26-col. 4, l. 31; col. 6, l. 19 - col. 21, l. 39). Compound (B) is an oxygen containing compound (col. 21, l. 45 – col. 22, l. 14). Compound (C) is represented by ionic formulae (9) or (10) which can be groups 5 to 15 of the periodic table of the elements (col. 22, l. 15 – col. 23, l. 63). The alkylating agent is also disclosed (col. 23, l. 65 – col. 24, l. 46). A method of preparing an

olefinic polymer was also disclosed in Examples 1(2) and Example 2(2), col. 30, l. 32-45 and col. 31, l. 28-37, respectively. No patentable distinction is seen between claimed catalyst and that taught by Yabunouchi, et al.

Claims 1-3 and 5-7, 10-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Yabunouchi, et al. (US 6171994 B1)

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Yabunouchi, et al. teach an olefin polymerization catalyst comprising 3 components (A), (B) and (C) (col. 6, l. 57-63). Compound (A) is a transition metal complex having Group 3 to 10 transition metals, most preferably titanium represented by formula (I) (col. 7, l. 7 - col. 16, l. 10). Compound (B) is an oxygen containing aluminum compound (col. 19, l. 9–55). Compound (C) is represented by ionic formulae (XIII) or (XIV) which can be groups 5 to 15 of the periodic table of the elements (col. 16, l. 56 – col. 19, l. 3). The alkylating agent is also disclosed (col. 20, l. 46–64). A method of preparing an olefinic polymer was also disclosed in Examples 2-5, 7-10, 12-15, 17-21, 22-25, 26(4), 27(7), and 28(7), col. 25, l. 60 - col. 44, l. 11. No patentable distinction is seen between claimed catalyst and that taught by Yabunouchi, et al.

Claims 1-3 and 5-7, 10-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Kashiwamura, et al. (US 6339135 B1).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

Kashiwamura, et al. teach an olefin polymerization catalyst comprising 3 components (A), (B) and (C) (col. 4, l. 29-36). Compound (A) is a transition metal complex having Group 3 to 10 transition metals, most preferably titanium (col. 5, l. 56 - col. 13, l. 54). Compound (B) is an oxygen containing compound (col. 17, l. 18–63). Compound (C) is represented by $((R'')_3\text{-}C\text{-}Y)_n\text{-}Z\text{-}(R^2)m\text{-}n$ which can be magnesium or aluminum alkyl defined herein as Lewis acid (col. 18, l. 56 – col. 20, l. 7). A method of preparing an olefinic polymer was also disclosed in Examples 2-4, 6, 9-10, col. 25, l. 53 - col. 26, l. 61 and col. 28, l. 18-30, and col. 30, l. 64 – col. 31, l. 27, respectively. No patentable distinction is seen between claimed catalyst and that taught by Kashiwamura, et al.

Response to Arguments

Applicant's arguments filed 12/23/2003 have been fully considered but they are not persuasive. The amendment clarified the claims by narrowing the definition of (B) and (D). The newly amended claims exclude the Tomotsu, et al. reference only because the amended formulae I-8 or I-9 oxygen containing compounds were not disclosed. The examiner has reviewed the previous rejections but has determined that the components claimed are still disclosed in the previously presented references and has maintained these rejections with clarification.

Anticipation does not require complete identity in the prior art, rather the MPEP states for anticipation under 35 U.S.C. 102, the reference must teach every aspect of the claimed invention either *explicitly or impliedly. Any feature not directly taught must be inherently present.* Emphasis added by the Examiner.

1. Regarding Takeguchi, et al., the $(R^1)_3$-C- portion of formula (I-1) in claim 1 is not drawn to a radical but is drawn with a covalent bond between the C and Z portion of the formula. Secondly, R^1 is defined in the claim as a hydrocarbon group, alkoxy group, aryloxy group, thioaryloxy group, amino group, amido group, carboxyl group or cyclohexyl group and may be bonded to each other to form a cyclic group and not drawn as a radical as argued by applicants. Furthermore there is no support in the specification for the suggestion that the formula I- 1 is based upon interaction of a radical but at most an ionic pairing. The number of carbon atoms and type of group given for R^1 as claimed overlaps with that of the cited reference. Examiner agrees that the disclosed formulas VIII and IX correspond with the claimed optional alkylating agents I-12, I-13 and I-14.

2. Regarding Aoyama, et al., here as pointed out above (1.), there is no radical in the claim and no support for such claim. Examiner agrees that the disclosed alkylating agents correspond with the claimed optional alkylating agents I-12, I-13 and I-14.

3. Regarding Yabunouchi, et al. (US 5854165, US 6255244, US 6171994), here as pointed out above (1.), there is no claimed radical and no support for such claim. Examiner agrees that the disclosed formulas correspond with the claimed optional alkylating agents.

4. Kashiwamura, et al., here as pointed out above (1.), there is no claimed radical and no support for such claim. Examiner agrees that the disclosed formulas correspond with the claimed optional alkylating agents.

5. Examiner drops the double patenting rejection because the claims as amended overcome the previous rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennine M. Brown whose telephone number is (571) 272-1364. The examiner can normally be reached on M-F 8:00 AM - 6:00 PM; first Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Bell can be reached on (571) 272-1362. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

jmb

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